

The Influence of Safety Management Practices on Safety Performance in Nurses of Emergency Installation on The Government Hospital of Surabaya

Khaulah Syahidah¹, Noeroel Widajati¹, Nurhayati Saridewi²

¹Research Scholar, ²Professor, Department of Occupational Health and Safety, ³Research Scholar Public Health Faculty, Airlangga University, 60115, Surabaya, East Java, Indonesia

Abstract

Introduction: Hospital is one of the high-risk workplaces in terms of safety and health. Nurses are the most vulnerable health workers to work accidents because they have the most number in a hospital and most often interact with patients. Safety performance is very important for the prevention of work accidents. This research aimed to analyze the influence of safety management practices on safety performance in nurses of the emergency installation at X Hospital of Surabaya.

Methods: This research was an observational research with the cross-sectional design. It was conducted in May to June 2019. The population in this study was 208 nurses and the sample obtained using a simple random sampling technique involving 68 nurses. In assessing safety management practices and safety performance, the researcher used questionnaires, observation, and interviews.

Results: The results presented that safety training which was a dimension of safety management practices affected on the safety performance with a p-value 0.000. Suggestions in this research, to improve safety performance, management can conduct specific and periodic safety training, holding safety briefing and safety talk on a regular basis, and implementing a safety award by applying a system of reward and punishment.

Conclusion: Hospital management still needs to schedule a specific and periodic safety training for nurses. Furthermore, to improve safety performance, management can holding safety briefing and safety talk on a regular basis, and implementing a safety award by applying a system of reward and punishment.

Keywords: Nurses, Safety management practices, Safety performance

Corresponding Author:

Noeroel Widajati

Department of Occupational Health and Safety,
Public Health Faculty, Airlangga University
Campus C, Jalan Mulyorejo, 60115, Surabaya,
East Java, Indonesia, Phone: +6285730961962
E-mail: noeroel.widajati@fkm.unair.ac.id

Introduction

The work accident is undesirable events and resulted in losses, as well as property damage and loss of process (Suma'mur, 2009)¹. Work accidents occurred due to a random combination of many factors that can generally be categorized into unsafe conditions and unsafe action. Unsafe action of

employees of the highest causes of work accidents that occur in comparison with unsafe working conditions (Choudhry & Fang, 2008)².

Data from the Social Security Organizing Agency / BPJS Employment (2019) states that in Indonesia in 2017 there were 123,041 work accident cases. This number has increased in 2018 with 173,105 work accident cases³.

One of the efforts to prevent work accidents is to improve safety performance. The term can refer to the safety performance of two concepts. The terms of safety performance can refer to safety results in an organization, such as the number of injuries or work accidents every year. In addition, the term safety performance can also refer to an individual's behavior related to the safety or can be called a safety behavior (Christian et al., 2009)⁴. Term safety performance used in this study refers to the behavior of safety. Safety performance by Neal & Griffin (2002) formed from safety compliance and safety participation. Safety compliance is safe behavior by employees in maintaining safety, while safety participation is the behavior of employees to participate in safety activities⁵.

Vinodkumar & Bhasi (2010) found that safety management practices influences safety performance. Vinodkumar & Bhasi (2010) states that the safety management practices is the practice, the role and management functions designed by the company to improve the safety of employees, which consisted of six dimensions, namely management commitment related to safety, safety training, involvement of workers in solving the problems of safety, safety communications, rules and safety procedures, and safety promotion policy⁶. In this research, the term refers to safety management practices on employee opinions against six dimension in safety management practices.

Hospital is one of the high-risk workplaces in terms of safety and health. Nurses are the most vulnerable health workers to work accidents because

they have the most number in a hospital and most often interact with patients. The results of the *National Safety Council (NSC)* report in 1988 showed that the workers in a hospital had 41% more risk of work accidents than workers in other industries. (Ministry of Health of the Republic of Indonesia, 2007)⁷.

The X Hospital of Surabaya is a place that provides health services to the general public. Emergency installation at X Hospital of Surabaya is a unit of service is most vital in helping to save the lives of patients with urgency medical when it first entered the hospital, because the handling of the emergency should get a response time of rapid and appropriate action causes the nurses in this section are often exposed to various source of danger that may threaten life and health as well as greater risk of work accidents.

Safety management practices are estimated to have an influence on safety performance and can improve these safety performance in hospital nurses. Therefore, this research aimed to analyze the influence of safety management practices on safety performance in nurses of the emergency installation at X Hospital of Surabaya.

Materials and Methods

This research was an observational research with the cross-sectional design. It was conducted in May to June 2019. The location of the study was the emergency installation at X Hospital in Surabaya. The population in this study was 208 nurses and the sample obtained using a simple random sampling technique involving 68 nurses. The dependent variable was safety performance. The independent variable was safety management practices that include management commitment, safety training, employee involvement in safety, safety communication and feedback, safety rules and procedures, and safety promotion policies. In assessing safety management practices and safety performance, the researcher used questionnaires, observation, and interviews. The data analysis used was descriptive analysis, relationship

analysis by chi-square test, and influence analysis by logistic regression test.

Results and Conclusion

Table 1 shows that most respondents stated all dimensions in safety management practices in good categories, namely management commitment (52.9%), safety training (58.8%), employee involvement in safety (83.8%), safety communication and feedback (75%), safety rules and procedures (82.4%) and safety promotion policies (72.1%). Table 2 shows that most respondents also had a good category in safety performance (54,4%).

Based on the results of the relationship analysis by chi-square test as shown in Table 3, the results

obtained a p-value of management commitment variable of 0.017, safety training variable of 0,000 and safety communication and feedback variables of 0.035. This means that the three variables is qualified as a candidate Multiple Logistic Regression (p-value <0.25). The candidate variables and then put together in multivariable analysis with logistic regression test to determine which the most influential variables.

Based on test results with logistic regression and using the backward: wald, it is known that the most influential variables that safety training, with a p-value of 0.000. Value B indicates a positive sign, which means nurses with good safety training has an increasingly good safety performance as well. (Table 4).

Table 1: Distribution of Safety Management Practices in Nurses of Emergency Installation at X Hospital of Surabaya, 2019

Safety Mangement Practices	Categories	n	%
Management commitment	Less	32	47,1
	Good	36	52,9
Safety training	Less	28	41,2
	Good	40	58,8
Employee involvement in safety	Less	11	16,2
	Good	57	83,8
Safety communication and feedback	Less	17	25,0
	Good	51	75,0
Safety rules and procedures	Less	12	17,6
	Good	56	82,4
Safety promotion policies	Less	19	27,9
	Good	49	72,1

Table 2: Distribution of Safety Performance in Nurses of Emergency Installation at X Hospital of Surabaya, 2019

Safety Performance	Categories	n	%
Safety Performance (safety compliance and safety participation)	Less	31	45,6
	Good	37	54,4

Table 3: Relationship between Safety Management Practices and Safety Performance in Nurses of Emergency Installation at X Hospital of Surabaya, 2019

Safety Management Practices	Safety Performance				Total		p-value
	Less		Good				
	n	%	n	%	N	%	
Management commitment							0,017
Less	20	62,5	12	37,5	32	100	
Good	11	30,6	25	69,4	36	100	
Safety training							0,000
Less	26	92,9	2	7,1	28	100	
Good	5	12,5	35	87,5	40	100	
Employee involvement in safety							0,748
Less	6	54,5	5	45,5	11	100	
Good	25	43,9	32	56,1	57	100	
Safety communication and feedback							0,035
Less	12	70,6	5	29,4	17	100	
Good	19	37,3	32	62,7	51	100	
Safety rules and procedures							0,511
Less	7	58,3	5	41,7	12	100	
Good	24	42,9	32	57,1	56	100	
Safety promotion policies							0,319
Less	11	57,9	8	42,1	19	100	
Good	20	40,8	29	59,2	49	100	

Table 4: The Results of Logistic Regression That The Influence of Safety Management Practices on Safety Performance in Nurses of Emergency Installation at X Hospital of Surabaya, 2019

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1a	Management commitment (1)	,084	,909	,008	1	,927	1,087	,183	6,456
	Safety training (1)	4,380	,949	21,281	1	,000	79,834	12,417	513,288
	Safety communication (1)	,981	,968	1,026	1	,311	2,666	,400	17,784
	Constant	-3,279	1,145	8,204	1	,004	,038		
Step 2a	Safety training (1)	4,413	,882	25,011	1	,000	82,542	14,639	465,406
	Safety communication (1)	,963	,944	1,040	1	,308	2,619	,412	16,673
	Constant	-3,238	1,044	9,616	1	,002	,039		
Step 3a	Safety training (1)	4,511	,876	26,528	1	,000	91,000	16,351	506,439
	Constant	-2,565	,734	12,218	1	,000	,077		

Discussion

The training is part of an educational process that is intended to improve the knowledge, skills and attitude. According to Cooper (2001), training is one of the most frequently used ways to change the behavior of workers that must be set properly [8]. Safety training is an activity of workers in acquiring knowledge about the dangers of work accidents, get new skills, educate workers to deal with the potential dangers so that workers have the behavioral attitude of safe work and care for the safety conditions in the workplace and can maintain safe behavior in a new environment (Statt, 2000)⁹.

Based on the survey results revealed that the dimensions of safety management practices that most influence on safety performance is safety training. This is in line with research by Syamtinngum (2017) which explains that there is a significant effect between the safety training and unsafe action, where the better the safety training of respondents, the lower the unsafe action¹⁰.

Conclusion

The evaluation of most of the nurses at the emergency installation in X Hospital of Surabaya for safety training was good. This is due to the management has been providing safety training in the

form of training related to standard precautions include hand hygiene, use of personal protective equipment, and waste management. Moreover, also conducted training related to occupational health and safety, among others, the use of portable fire extinguisher and handling of hazardous and toxic material.

This study concludes that there is an influence of safety management practices on safety performance. Through a given safety training can increase the knowledge and skills of nurses so as to improve safety performance at the nurse anyway. Suggestions in this study, hospital management still needs to schedule a specific and periodic safety training for nurses. Furthermore, to improve safety performance, management can holding safety briefing and safety talk on a regular basis, and implementing a safety award by applying a system of reward and punishment.

Ethical Clearance: This study was approved by Ethic Committee in Regional Public Hospital Health Research, Dr. Soetomo Surabaya, Indonesia with registration number 1184/KEPK/V/2019.

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Conflict of Interest: Nil

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